Outdoor Lighting NRCC-LTO-E (Created 01/20)



CERTIFICATE OF COMPLIANCE												NRCC-LTO-E
This document is used to demonstrate comp	liance wi	th requirement	s in	§110.9, §130.	<u>0, §</u>				utdo	or lighting scopes u	sing the pr	•
Project Name:								Page:				Page # of ##
Project Address:						Dat	e Pr	epared:				
A. GENERAL INFORMATION												?
01 Project Location (city)						04 Total Illu	min	ated Hardscape Ar	ea (f	t ²)		
02 Climate Zone												
03 Outdoor Lighting Zone per Title 24, Par	t 1 §10-1	14 or as desigi	nate	ed by Authority	у На	aving Jurisdicti	on (AHJ):				
LZ-0: Very Low - Undeveloped Parkland	LZ-2	: Moderate - R	ural	l Areas		LZ-4: High	- M	lust be reviewed by	'CA	Energy Commission	for Appro	val
LZ-1: Low - Developed Parkland	LZ-3	: Moderately H	igh	- Urban Areas								
B. PROJECT SCOPE												
Table Instructions: Include any outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path												
outlined in <u>§140.7</u> or <u>§141.0(b)2L</u> for alterat	ions.											
My project consists of:		T										
01								02				
New Lighting System				h Allowances f						_		
Altered Lighting System		Is your alterat	ion	increasing the	COI	nnected lightir	ıg lo	ad (Watts)?		○ Yes		○ No
03				04						05		
% of Existing Luminaires Being Altere		Sum Total o	f Lu	uminaires Being	g Ao	dded or Altere	d			Calculation Meth	od	
	: 50%											•
STOP! Outdoor lighting projects modifying not increase the total connected lighting lo		n 5 luminaires,	or	less than 10%	of e	existing lumino	aires	s do not require co	mpli	ance documentatio	n provided	d that they do
Please proceed to Table F. Outdoor Lighting		Schedule to de	fin	e the project's	lun	ninaires.						
¹ FOOTNOTES: % of Existing Luminaires Being	g Altered	= (Sum Total c	f Lι	ıminaires Bein	g A	dded or Altered	d / E	existing Luminaires	with	in the Scope of the	Permit App	olication) x 100
C. COMPLIANCE RESULTS												?
Table Instructions: If any cell on this table sa	ys "DOES	S NOT COMPLY	" oı	r "COMPLIES w	ith	Exceptional Co	ndi	tions" refer to Table	2 D. j	for guidance.		
Calculation of Total Allowed	Lighting	Power (Watts) <u>§1</u>	<u>140.7</u> or <u>§141.0</u>)(b)	<u>2L</u>				Compliance Resu	ılts	
01 02 03		04		05		06		07		08		09
General Per Sale	S			Per Specific		Existing						
Hardscape + Application + Fronta	-	Ornamental	namental + Area OR Power = Total Allowed > Total Actual									
Allowance §140.7(d)2 §140.7		§140.7(d)2	0.7(d)2 §140.7(d)2 §141.0(b)2L (Watts) (Watts) 07 Must be ≥ 08								/lust be≥08	
(See Table I) (See Table J) (See Tab	ole K)	(See Table L)	Table L) (See Table M) (See Table N) (See Table F)									
+ + +	+	,	+		OR		=		2	, ,		
		Cutof	f Co	ompliance (See			ils)		I			

Table Continued

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Project Name:	Report Page:	Page # of ##
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	Calculation of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L											Compliance Results			
01		02		03		04		05		06		07		08	09
General Hardscape Allowance §140.7(d)1	+	Per Application §140.7(d)2	+	Sales Frontage §140.7(d)2	+	Ornamental §140.7(d)2	+	Per Specific Area §140.7(d)2	OR	Existing Power §141.0(b)2L	=	Total Allowed (Watts)	>	Total Actual (Watts)	07 Must be ≥ 08
(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)		(See Table N)				(See Table F)	
	Controls Compliance (See Table H for Detail							ils)							

D. EXCEPTIONAL CONDITIONS

?

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Selections made in Table O have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation. Selections made in Table P have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

E. ADDITIONAL REMARKS



This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. OUTDOOR LIGHTING FIXTURE SCHEDULE



This Section Does Not Apply

F. OUTDOOR LIGHTING FIXTURE SCHEDULE



Table Instructions: For new or altered lighting systems demonstrating compliance with §140.7 (ie Table I has expanded for input), include all luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L (ie Table N has expanded for input), include only new luminaires being installed and replacement luminaires being installed as part of the project scope (ie, do not include existing luminaires remaining or existing luminaires being moved).

Designed Wattage:

Table Continued

NRCC-LTO-F (Created 01/20)



INNCC-LIO-E (Created 01/20)						CA	LIFORINIA EINERGT CO	JIVIIVIISSIOI	4
CERTIFICAT	TE OF COMPLIANCE								NRO	CC-LTO-E
Project Nar	ne:				Report Page	:			Pag	e # of ##
Project Ado	dress:				Date Prepare	ed:				
01	02	03	04	05	06	07	08	09	1	.0
Name or		Watts per	How Wattage is	Total number	Luminaire	Excluded per		Cutoff Req. ≥ 6,200 initial	Field In:	spector
Item Tag	Complete Luminaire Description	luminaire ¹	determined	luminaires	Status ²	§140.7(a)	Design Watts	lumen output §130.2(b) ³	Pass	Fail
			▼		V			V		
					Total C	Designed Watts:				
* NOTES: S	Selections with a * require a note in tl	he space belov	w explaining how o	compliance is ach	nieved.					
EX: Lumino	aire is lighting a statue; EXCEPTION 2	to §130.2(b).								
							Reset	Add Row	Remov	ve Last

G. CUTOFF REQUIREMENTS (BUG)

This Section Does Not Apply

G. CUTOFF REQUIREMENTS (BUG)

Table Instructions: Complete this table for fixtures ≥6,200 initial luminaire lumens indicated on Table F as needing to comply with Cutoff Requirements. Maximum lumens can be found in Title 24, Part 11, Section 5.106.8.

,	, ,				_							
01	02		03			04			05		06	
		Backlight Rating ²			Upligh	nt Rating ²		Glare	Field Inspector			
Name or Item Tag	Complete Luminaire Description	Mounting Height ¹	Max Allowable Backlight Rating ³	Backlight Rating per Design		Max Allowable Uplight Rating ³	Uplight Rating per Design	Mounting Height ¹	Max Allowable Glare Rating ³	Glare Rating Per Design	Pass	Fail
		•			•			·				
											Res	set

¹ FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per <u>§130.0(c)</u>

² Select "New" for new luminaires in a new outdoor lighting project or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope

³ Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output ≥ 6,200 unless exempted by §130.2(b).

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CALIFORNIA ENERGY COMMISSION	Satisfer Commission

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H. OUTDOOR LIGHTING CONTROLS

?

This Section Does Not Apply

H. OUTDOOR LIGHTING CONTROLS



Table Instructions: Complete this table demonstrating compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.

When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank. For each requirement in columns 02 through 07, do not leave the field blank, instead select NA or Exempt* from the dropdown list to indicate not applicable or an exemption.

Mandatory Controls					
01	02	03	04	C)5
Area Description	Shut-Off	Auto-Schedule	Motion Sensor	Field In	spector
	<u>§130.2(c)1</u>	<u>§130.2(c)2</u>	<u>§130.2(c)3</u>	Pass	Fail
	▼	▼	▼		

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.

EX: Not permitted by health & safety to be turned off; EXCEPTION 1 to §130.2(c).

Reset Remove Last

I. LIGHTING POWER ALLOWANCE (per §140.7)



This Section Does Not Apply

I. LIGHTING POWER ALLOWANCE (per §140.7)



Table Continued

¹ FOOTNOTES: Mounting Height is labeled MH in this table

² Authority having jurisdiction may ask for luminaire cut sheets or other documentation to confirm luminaire type, backlight, uplight, and glare ratings used for compliance per <u>§130.2(b)</u>.

³ BUG ratings with a lower number than the 'Max Allowable' are compliant. Ex. If Max Allowable is Bug Rating is B4, then B0, B1, B2, B3 and B4 are all compliant.

NRCC-LTO-F (Created 01/20)



NRCC-LTO-E (Created 01/20)											CALIFORNIA E	NERGY CO	
CERTIFICATE OF COMPLIANCE													NRCC-LTO-E
Project Name:						Report							Page # of ##
Project Address:						Date P	repare	ed:					
Table Continued													
Table Instructions: Please comple	ete this table for are	eas using the						01					
allowance calculations per <u>§140.</u>		•				"Use it or lose it" Allowance (Watts)							
is per <u>Table 140.7-A</u> while "Use it		•	Gene								, ,		
<u>Table 140.7-B</u> . Indicate which all	_			Hardscape		· Applicat	ion	Sales Frontage		e Ornament			er Specific Area
expand sections for user input. L	•		Allowa	ince	Fe	Applicat	ן ווטוו		Untage	U Orı	iaiiieiitai	''	si Specific Area
the "Use it or lose it" allowances	shall not qualify fo	r another "Use			_								
it or lose it" allowance.			Table I (bel		Т	able J		Table k		Tak	ole L		Table M
Calculated General Hardscape Lig	ghting Power Allow	ance per <u>Table</u>	<u>140.7-A</u> (LZ0, 1	L & 4)									
02		03	04		C)5		06		07	08		09
		Are	a Wattage Allo	wance	(AWA)			Linear \	Wattage	Allowanc	e (LWA)		Total General
Area Description	on	Illuminated	d Allowed D	ensity	Area Al	lowance	P	erimeter	Allowe	ed Density	Linear Allo	owance	AWA + LWA
	Area (ft²)	(W/ft	²)	(Wa	atts)	Le	ength (If)	(\	N/lf)	(Wat	ts)	(Watts)	
									R	eset	Add R	ow	Remove Last
							lni	tial Wattage	Allowa	ance for E	ntire Site (\	Watts):	
								Total Gen	eral Ha	rdscape Al	lowance (Watts):	
Calculated General Hardscape Lig	ghting Power Allow	ance per <u>Table</u>	140.7-A (LZ 2 8	દ્રે 3)									
02	03	04	05		06	07	7	08		09		10	11
	Ar	ea Wattage Allo	owance (AWA)					Linear Wat	tage All	owance (L	WA)		
		Allowed	Allowed		rea			Allowe		Allowed			Total General
Area Description	Illuminated	Density	Density		wance	Perim	eter	Densit		Density	Li	near	AWA + LWA
·	Area (ft²)	Asphalt	Concrete		/atts)	Lengt		Aspha		Concrete	,	wance	(Watts)
	\	(W/ft²)	(W/ft²)				` '	(W/ft ²		(W/ft^2)	(W	/atts)	
		1	L							Reset	Add	d Row	Remove Last
							ı	nitial Watta	ge Allov	wance for	Entire Site	(Watts):	:
											Allowance		
												,	
J. LIGHTING ALLOWANCE: PEI	R APPLICATION												?
This Section Does Not Apply													
J. LIGHTING ALLOWANCE: PEI	R ADDITION												?
J. LIGHTHNG ALLOWAINCE: PEI	AFFLICATION												





, , ,		
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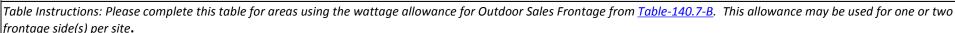
Table Instructions: Please comple	te this table for areas using t	he wattage a	ıllowance per	application fr	om <u>Table-140</u>) <u>.7-B</u> .			
01	02	03	04	05	06	07	08	09	10
		CALCULAT	ED ALLOWAN	CE (Watts)		DESIG	N WATTS		Additional
Area Description	Application per <u>Table</u> <u>140.7-B</u> ¹	# of Locations	Allowance per Location ² (Watts)	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires	Design Watts	Allowance (Watts)
	•				•				
					Total (Design Watts	for this Area:		
								Add Luminaire	Remove Last
Total Allowance (Watts) All Areas:									
							Reset	Add Row	Remove Last

¹ FOOTNOTES: Primary entrance applications are only available for senior care facilities, healthcare facilities police stations, hospitals, fire stations, and emergency vehicle facilities.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This Section Does Not Apply

K. LIGHTING ALLOWANCE: SALES FRONTAGE



frontage side(s) per site.									
01	02	03	04	05	06	07	08	09	
	CALCULA	ATED ALLOWANCE	E (Watts)		Additional				
Area Description	Linear ft. of Sales Frontage (If)	ear ft. of Sales Allowed Density Extra Allorontage (If) (W/If) (Wat		Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires	Design Watts	Allowance (Watts)	
				•					
					Total Design W	atts for this Area:			
							Add Luminaire	Remove Last	
						Total Allowance	(Watts) All Areas:		
						Reset	Add Row	Remove Last	

² The Allowance per Location for ATMs is <u>100W</u> for the first ATM and <u>35W</u> for each additional per Table 140.7-B.

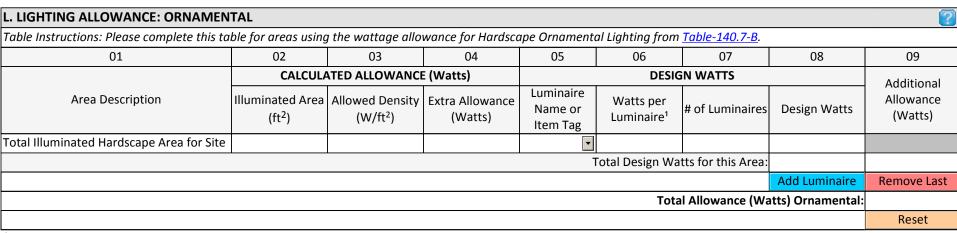
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L. LIGHTING ALLOWANCE: ORNAMENTAL

This Section Does Not Apply



¹ FOOTNOTES: Luminaires qualifying for this allowance shall be rated < 100W and shall be post-top luminaires, lanterns, pendants or chandeliers.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This Section Does Not Apply

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

Table Instructions: Please complete this table for areas using the wattage allowance per specific area type from <u>Table 140.7-B</u>. More than one specific area allowance may be taken in a single project, if applicable. However, multiple specific area allowances may not be taken for the exact same area on the site.

Area Description Specific Area Type per Table 140.7-B Area Description Specific Area (ft²)¹ (W/ft²) (Watts) Specific Area (ft²)¹ (W/ft²) (Watts) Total Design Watts DESIGN WATTS Additional Allowance (Watts) Allowance (Watts) Total Design Watts for this Area:	Ī	01	02	03	04	05	06	07	08	09	10
Area Description Specific Area Type per Table 140.7-B Specific Area Type per Gradient of the per Table 140.7-B Specific Area Type per Table 140.7-B Area (ft²)¹ Watts per Luminaire Name or Item Tag Watts per Luminaire Uninaire Name or Item Tag Watts per Luminaire Name or Item Tag Allowance (Watts)	Ī			CALCULATE	D ALLOWAI	NCE (Watts)		DESIG	N WATTS		Additional
Table 140.7-B Area (ft²)¹ (W/ft²) Allowance (Watts) Item Tag Allowance Luminaire Luminaires Design Watts (Watts) Design Watts		Area Description		Specific	Allowed	Extra	Luminaire	Watts ner	# of		
(ft²)¹ (W/ft²) (Watts) Item Tag		7 Ca. 2 Coo p a.c	<u>Table 140.7-B</u>		•	Allowance	Name or	•	_	Design Watts	
Total Design Watts for this Area:				(ft ²) ¹	(W/ft ²)	(Watts)	Item Tag	Lammane	Lammanes		(Wates)
Total Design Watts for this Area:											
Total Design Watts for this Area:											
							Total De	esign Watts f	or this Area:		

Total Allowance (Watts) All Areas:

Add Luminaire

Table Continued

Remove Last

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Project Nam				Report Page: Page # of #					
Project Add	ress:		Date	Prepared:					
					Reset	Add	Row	Remo	ove Last
¹ FOOTNOT	ES: See <u>Table</u>	<u>e 140.7-B</u> for the rules for calculating the specific areas (ft²) for t	these additional l	ighting allowances.)				
		ONS POWER ALLOWANCE (alterations only)							?
This Section	Does Not A	pply							
N. EXISTIN	IG CONDITI	ONS POWER ALLOWANCE (alterations only)							?
		de all existing luminaires being replaced to establish the lighting sed should NOT be included.	g power allowand	ce per <u>§141.0(b)2Lii</u> (or <u>§141.0(b)2Liii</u> .	Existing lun	ninaires	that are	
Existing Co	nditions Wa	ttage:							
01		02	03	04	05	06		0	17
Name or I	tem	Country to Louis in December 1	_	How Wattage is	# of Luminaires	Existing Watts	A / - ++ -	Field Inspector	
Tag		Complete Luminaire Description		determined			vatts	Pass	Fail
				▼					
	•		-	Tot	al Existing Watts:				
				Allowance	e per <u>§141.0(b)2L</u> :				
		h a * require a note in the space below explaining how compliant a statue; EXCEPTION 2 to §130.2(b).	ince is achieved.						
EX. Lummu		Tu statue, EXCEPTION 2 to \$150.2(b).							
					Reset	Add Ro	ow	Remov	ve Last
¹ FOOTNOT	ES: Authority	Having Jurisdiction may ask for Luminaire cut sheets to confirm	n wattage used fo	or compliance per <u>§1</u>	1 <u>30.0(c)</u>				
		REQUIRED CERTIFICATES OF INSTALLATION							?
Table E. Add	ditional Rem	tions have been made based on information provided in previolarks. These documents must be provided to the building inspect 15publications/CEC-400-2015-033/appendices/forms/NRCI					lease ex	kplain wh	ny in
YES	NO	Form/Title Field Inspector						ctor	
	""		,				Pas	s	Fail
•	0	NRCI-LTO-01-E - Must be submitted for all buildings.							
•	0	NRCI-LTO-02-E - Must be submitted for a lighting control syste recognized for compliance.	NRCI-LTO-02-E - Must be submitted for a lighting control system; or for an Energy Management Control System (EMCS), to be recognized for compliance.						

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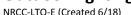
CERTIFICATE OF COMPLIANCE	NRCC-L'	ТО-Е
Project Name:	Report Page: Page # c	of ##
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P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE



Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Ì	YES	NO Form/Title	Field Inspector		
	1123	INO	Form/Title ——		Fail
	•		NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls area added to ≤ 20 luminaires.		





CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Report Page:	Page # of ##
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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT				
Documentation Author Name:	Documentation Author Signature:			
Company:	Signature Date:			
Address:	CEA/ HERS Certification Identification (if applicable):			
City/State/Zip:	Phone:			

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

- 1. The information provided on this Certificate of Compliance is true and correct.
- 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
- 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Responsible Designer Signature:
Company:	Date Signed:
Address:	License:
City/State/Zip:	Phone: